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PILLSBURY MADISON & SUTRO
INTELLECTUAL PROPERTY GROUP
1100 NEW YORK AVENUE N W
NINTH FLOOR EAST TOWER
WASHINGTON, DC 200053918

EXAMINER

KAVITSKY, RONALD I

ART UNIT

PAPER NUMBER

2123

DATE MAILED: 07/31/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/273,256

Applicant(s)

SUZUKI ET AL.

Examiner

Ronald I Kavitsky

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 1999 and 20 February 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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DETAILED ACTION

Introduction

1. Claims 1-21 are examined. Claims 1-21 are rejected.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

3. WO 98/09203 was inadvertently crossed off the IDS sheet; it was considered during the examination of this case and is listed on form PTO-892.

Specification

4. The disclosure is objected to because of the following informalities: on page 44, line 14, "judges" should be "judged". Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 5 recites the limitation "plurality of machining processes" on page 49, line 2.

There is insufficient antecedent basis for this limitation in the claim. This claim depends upon claim 1, which involves "a machine process".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fishman (6,112,133) in view of Kahn et al (4,866,635). Claims 1 and 21 are almost identical, except that claim 1 is for an apparatus and claim 21 is for a method. Claim 1 states:

An apparatus for aiding a machinist in preparing a programmed machine for a machining process, wherein a basic program is run for setting values of various machining variables based on information input by the machinist, the apparatus comprising:

an analyzing means for analyzing the variable values to determine the efficiency of the machining process;

and a notifying means for notifying
an advisory message to the machinist regarding on how to improve the machining process in accordance with the analysis performed by the analyzing means.

Fishman teaches about a visual system for generating a CNC program for machining a part by an operator (aiding a machinist in preparing a programmed machine for a machining process) using an interface module (See Column 3/lines 24-26, Figure 6, Column 5/lines 19-22). This program is prepared by inputting part information (machining variables) into a computer system (graphical user interface system) (See Column 3/lines 60-65 for definition of part

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information), which is equivalent to the section of the claim concerning running a basic program “for setting values of various machining variables based on information input by the machinist”. This part machining information is analyzed (analyzing means) by a process optimization module to optimize the efficiency of machining the part (See Column 6/lines 59-65). One facet of the Fishman patent that is particularly pertinent to this application is that the process optimization module uses a material machinability database containing recommended material removal speeds as a function of tool parameters. This machinability optimization analysis can be presented to the operator (notify the machinist) to recommend or advise the operator about the current efficiency or how to improve his machining process (See Figure 10). This chart discloses an increase in machining speed per a selected drill tool diameter for work piece material type (High Speed Steel). The operator could stay with or modify his current machining variable selection to decrease machining time (increases in feet per minute) (See Column 7/lines 14-19).

Fishman does not teach about an advisory message to a machinist; after all the input is completed, the main output from Fishman to the machinist is a default machining program containing a sequence of operations which the machinist may change if he so desires.

Kahn et al teaches about an expert system for selecting the best repair procedure among a plurality of repair procedures. The output of the system is a recommendation (notification) that selects the optimum procedure for the given input diagnostics.

It would have been obvious to one knowledgeable in the art at the time of the invention to combine the output from Fishman with the recommendation (notification) system of Kahn et al in order that the output from Fishman would be presented as an advisory message instead of a

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machining program. It would also be obvious that the program displayed by Fishman is based upon the optimization program (analysis means).

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fishman (6,112,133) in view of Kahn et al (4,866,635);

An apparatus for aiding a machinist in preparing a programmed machine for a plurality of machining processes, wherein a basic program is run for setting values of various machining variables based on information input by the machinist, the apparatus comprising:

a computer for running a simulation program for simulating machining according to the basic program;

an input device for designating a certain machining process;

an analyzing means for analyzing the machining variables of the designated machining process to determine the machining efficiency of that machining process;

a memory for storing a plurality of messages that give advice to the machinist regarding on how to improve machining;

a display means for selecting a message from the memory in accordance with the analysis performed by the analyzing means and displaying the selected message.

Fishman teaches about a computer visual system for generating a CNC program for machining a part by an operator (aiding a machinist in preparing a programmed machine for a plurality of machining processes) using an interface module (See Column 3/lines 24-26, Figure 6, Column 5/lines 19-22). This program is prepared by the machinist inputting part information (machining variables) into a computer system (graphical user interface system) (See Column 3/lines 60-65 for definition of part information), which is equivalent to the section of the claim concerning running a basic program “for setting values of various machining variables based on information input by the machinist” and also the apparatus section concerning “an input device for designating a certain machining process”. The system is system is capable of simulating and

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displaying the tool path and other information (See Column 6/lines 53-55). This part machining information is analyzed (analyzing means) by a process optimization module to optimize the efficiency of machining the part (See Column 6/lines 59-65). One facet of the Fishman patent that is particularly pertinent to this application is that the process optimization module uses a material machinability database containing recommended material removal speeds as a function of tool parameters. This machinability optimization analysis can be presented to the operator (display means) to recommend or advise the operator about the current efficiency or how to improve his machining process (See Figure 10). This chart discloses an increase in machining speed per a selected drill tool diameter for work piece material type (High Speed Steel). The operator could stay with or modify his current machining variable selection to decrease machining time (increases in feet per minute) (See Column 7/lines 14-19).

Fishman does not teach about an advisory message to a machinist; after all the input is completed, the main output from Fishman to the machinist is a default machining program containing a sequence of operations which the machinist may change if he so desires.

Kahn et al teaches about an expert system for selecting the best repair procedure among a plurality of repair procedures. The output of the system is a recommendation (notification or displayed message) that selects the optimum procedure for the given input diagnostics. Kahn et al teaches also teaches about notes that are entered into memory to be used as output messages (See Column 14/ line 66 through Column 15/line 5) and messages that are to be displayed in response to analysis of input data (See Column 21/lines 5-11).

It would have been obvious to one knowledgeable in the art at the time of the invention to combine the output from Fishman with the message (notification or display) system of Kahn

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et al in order that the output from Fishman would be a notification or displayed message instead of a machining program. It would also be obvious that the program displayed by Fishman is based upon the optimization program (analysis means) and that the messages of both Fishman and Kahn et al are forms stored in memory that are displayed, sometimes with additional data that depends upon input data or the results of analysis.

8. Claims 2 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fishman (6,112,133) in view of Kahn et al (4,866,635). Claims 2 and 14 are identical, except that claim 2 depends upon claim 1 and uses the notifying means of claim 1 to notify an operator, whereas claim 14 depends upon claim 13 and uses the display means of claim 13 to display a message to the operator. Claims 1 and 13 are somewhat similar, except that claim 1 is for a single machining process, whereas claim 13 is for a plurality of machining processes and also includes some additional features. The claims are:

Claim 2: The apparatus according to claim 1, wherein the analyzing means compares a value of at least one of the variables with a criterion to judge whether or not the machining efficiency can be improved, and wherein the notifying means notifies a message if the machining efficiency can be improved.

Claim 14: The apparatus according to claim 13, wherein the analyzing means compares a value of at least one of the variables with a criterion to judge whether or not the machining efficiency can be improved, and wherein the displaying means displays a message if the machining efficiency can be improved.

As taught in paragraphs 6 and 7 above, Fishman in view of Kahn et al teach about the system of claim 1 and 13.

As in claims 2 and 14, Fishman teaches the machinability optimization analysis (analyzing means) which can be presented to the operator (notify the operator) to recommend or advise the operator about the current efficiency or how to improve his machining process (See Figure 10). This chart discloses an analyzing means to judge the increase in machining speed per

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a selected drill tool diameter for work piece material type (High Speed Steel). The operator can make a determination about the efficiency of machining hours for a part process or "downtime" for subsequent machining processes on the part (i.e., machine speed vs. tool diameter) (See Column 7/lines 14-19).

Fishman does not teach about an advisory message to a machinist; after all the input is completed, the main output from Fishman to the machinist is a default machining program containing a sequence of operations which the machinist may change if he so desires. The output contains recommendations for default cutting speeds of tools.

Kahn et al teaches about an expert system for selecting the best repair procedure among a plurality of repair procedures. The output of the system is a recommendation (notification or displayed message) that selects the optimum procedure for the given input diagnostics.

It would have been obvious to one knowledgeable in the art at the time of the invention to combine the output from Fishman with the recommendation (notification or display) system of Kahn et al in order that the output from Fishman would be a notification or displayed message instead of a machining program.

9. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fishman (6,112,133) in view of Kahn et al (4,866,635);

Claim 3: The apparatus according to claim 1, wherein the notifying means includes a display device for displaying a message.

Claim 4: The apparatus according to claim 1 further comprising a memory for storing a plurality of messages, wherein the notifying means selects a message from the memory in accordance with the analysis performed by the analyzing means and notifies the selected message.

As taught in paragraph 6 above, Fishman in view of Kahn et al teach about the system of claim 1.

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As in claims 3 and 4, Fishman teaches about the machinability optimization module or analysis which can be presented to the operator on a visual display to recommend or advise the operator about the current efficiency or how to improve his machining process (See Figure 10). This chart discloses or notifies the operator of a plurality of "messages" in chart format of machine variable parameters from its computer memory from its analysis of machining speed per a selected drill tool diameter for the work piece material type (High Speed Steel) (See Column 7/lines 14-19).

Fishman does not teach about messages to a machinist; after all the input is completed, the main output from Fishman to the machinist is a default machining program containing a sequence of operations which the machinist may change if he so desires.

Kahn et al teaches about an expert system for selecting the best repair procedure among a plurality of repair procedures. The output of the system is a recommendation (notification or displayed message) that selects the optimum procedure for the given input diagnostics. Kahn et al teaches also teaches about notes that are entered into memory to be used as output messages (See Column 14/ line 66 through Column 15/line 5) and messages that are to be displayed in response to analysis of input data (See Column 21/lines 5-11).

It would have been obvious to one knowledgeable in the art at the time of the invention to combine the output from Fishman with the message (notification or display) system of Kahn et al in order that the output from Fishman would be a notification or displayed message instead of a machining program. It would also be obvious that the program displayed by Fishman is based upon the optimization program (analysis means) and that the messages of both Fishman

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and Kahn et al are forms stored in memory that are displayed, sometimes with additional data that depends upon input data or the results of analysis.

10. A corrected claim 5 (that would correct the rejection under 35 U.S.C. 112, second paragraph, that was given in paragraph 5) would be rejected under 35 U.S.C. 103(a) as being unpatentable over Fishman (6,112,133) in view of Kahn et al (4,866,635);

The apparatus according to claim 1, wherein the basic program is run for setting the values of machining variables for a plurality of machining processes, wherein the apparatus comprises an input device for designating a certain one of the machining processes, and wherein the analyzing means analyzes the machining variables of the designated machining process.

As taught in paragraph 6 above, Fishman in view of Kahn et al teach about the system of claim 1.

Fishman teaches about using an interface module or input device for setting machining variable values for its particular machining process, i.e., part face information which includes boundary, orientation, hole diameter and depth, and machining function to machine the part. (See Column 5/lines 19-30, Column 6/lines 1-5, and Figure 8). Once all this part face information is inputted into the system it is transferred to the process optimization module (analyzing means) for analysis (See Column 6/line 60).

11. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fishman (6,112,133) in view of Kahn et al (4,866,635);

The apparatus according to claim 1 further comprising a simulation program for simulating the execution of the basic program, wherein the analyzing means performs the analysis based on information produced by execution of the simulation program.

As taught in paragraph 6 above, Fishman in view of Kahn et al teach about the system of claim 1.

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Fishman teaches about an optimization software program or a simulation program that analyzes machining process data from information transferred or executed from the interface module (See Column 6/lines 53-63).

12. Claims 7 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fishman (6,112,133) in view of Kahn et al (4,866,635);

Claim 7: The apparatus according to claim 1, wherein the machining variables include the load applied to a spindle of the machine during a cutting operation.

Claim 15: The apparatus according to claim 13, wherein the machining variables include the load applied to a spindle of the machine during a cutting operation.

As taught in paragraphs 6 and 7 above, Fishman in view of Kahn et al teach about the systems of claims 1 and 13.

As in claims 7 and 15, Fishman further teaches about the optimization modules' material machinability database which does analyze (analyzing means) or select the material cutting speeds and feed rate (rate of depth of cut) based on the face information supplied by the interface module.

13. Claims 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fishman (6,112,133) in view of Kahn et al (4,866,635);

Claim 8: The apparatus according to claim 1, wherein the machining variables include the cutting speed of a cutting tool attached to the machine.

Claim 16: The apparatus according to claim 13, wherein the machining variables include the cutting speed of a cutting tool attached to the machine.

As taught in paragraphs 6 and 7 above, Fishman in view of Kahn et al teach about the systems of claims 1 and 13.

As in claims 8 and 16, Fishman teaches about the optimization modules' material machinability database which does analyze (analyzing means) or select the material's

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recommended cutting speeds from the specified face information supplied by the interface module. The operator can be notified by customized charts about the efficiency of the variable relationships for subsequent modification (See Column 7/lines 5-15).

14. Claims 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fishman (6,112,133) in view of Kahn et al (4,866,635);

Claim 9: The apparatus according to claim 1, wherein the machining variables include the rotating speed of a spindle of the machine during a cutting operation.

Claim 17: The apparatus according to claim 13, wherein the machining variables include the rotating speed of a spindle of the machine during a cutting operation.

As taught in paragraphs 6 and 7 above, Fishman in view of Kahn et al teach about the systems of claims 1 and 13.

As in claims 9 and 17, Fishman further teaches about the optimization modules' material machinability database which does analyze (analyzing means) or select the material cutting speeds and feed rate (rate of depth of cut) based on the face information supplied by the interface module.

Fishman does not teach specifically about analyzing or selecting a recommended or an optimal spindle rotating speed during the cutting operation as in claims 9 and 17.

It would have been obvious to one who had ordinary skill in the art at the time of the invention that specifying the optimal machining parameters from the optimal module: cutting speed (rotating speed of the tool) and the feed rate (rate of depth of cut) is equivalent to specifying and analyzing the spindle load forces and the spindle rotating speed which is ultimately transferred from the forces of the cutting machine/chuck to the tool and ultimately to the work piece which will be controlled by changes in the operator inputs of feed rate, cutting

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speed, and tool bit geometry (See Figure 11 for the tool geometry table from the optimization module). Further, it would have been obvious to one who had ordinary skill in the art at the time of the invention as an example, that if the feed rate or depth of cut is too high, "galling" or large metal "chips" would occur between the cutting edges of the tool and the work piece which would cause "chatter" marks on the work piece which would increase the machine's spindle's load and affect the rotational speed of the spindle due to the high resistance on the tool bit from the excess material in its cutting edges. Therefore, if the appropriate feed rate, cutting speed, and tool geometry are selected for the part and the specified surface finish is being produced then the both the spindle load and its rotating speed will be within its maximum limits.

15. Claims 10, 12, 18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fishman (6,112,133) in view of Kahn et al (4,866,635);

Claim 10: The apparatus according to claim 1, wherein the message advises the machinist to increase the cutting speed of a cutting tool.

Claim 12: The apparatus according to claim 1, wherein the message advises the machinist to increase the rotating speed of a spindle of the machine

Claim 18: The apparatus according to claim 13, wherein the message advises the machinist to increase the cutting speed of a cutting tool.

Claim 20: The apparatus according to claim 13, wherein the message advises the machinist to increase the rotating speed of a spindle of the machine.

As taught in paragraphs 6 and 7 above, Fishman in view of Kahn et al teach about the systems of claims 1 and 13.

As in claims 10, 12, 18, and 20, Fishman further teaches about the optimization modules' material machinability database which does analyze (analyzing means) or select the material cutting speeds and feed rate (rate of depth of cut) based on the face information supplied by the interface module. This optimization module does produce charts that disclose an analyzing

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means to judge the changes in machining parameters, e.g., speed per a selected drill tool diameter for work piece material type (such as High Speed Steel; See Figure 10). This information provides the operator a basis or an advisory means to make a determination about the efficiency of machining hours for a part process or "downtime" for subsequent machining processes on the part (i.e., machine speed vs. tool diameter) (See Column 7/lines 14-19).

Fishman does not teach about producing a message to tell the operator to increase the cutting speed of the cutting tool, or the rotating speed of the spindle.

It would have been obvious to one who had ordinary skill in the art at the time of the invention that the chart as taught by Fishman could be extended to recommended a cutting speed for a tool bit and a rotational spindle speed for a process for the operator since it graphs in computer software the relationship of cutting speed for a range of tool diameters (optimal module cutting speed data)(See Figure 10).

16. Claims 11 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fishman (6,112,133) in view of Kahn et al (4,866,635);

Claim 11: The apparatus according to claim 1, wherein the message advises the machinist to change a cutting tool.

Claim 19: The apparatus according to claim 13, wherein the message advises the machinist to change a cutting tool.

As taught in paragraphs 6 and 7 above, Fishman in view of Kahn et al teach about the systems of claims 1 and 13.

As in claims 11 and 19, Fishman further teaches about selecting cutting tools from a predefined tool capability database (See Column 6/lines 39-45). In addition, this tooling software programming allows the operator to visualize the tool path to machine the part (See

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Column 6/lines 53-55). This information is transferred to the optimization module. This optimization module has an analyzing means to group the appropriate tools with their machining operations to minimize the number of tool changes (See Column 6/lines 62-66). In addition, the optimization module does produce charts that disclose an analyzing means to judge the changes in machining parameters, e.g., speed per a selected drill tool diameter for work piece material type (High Speed Steel). This information provides the operator a basis or an advisory means to make a determination about the efficiency of machining hours for a part process or "downtime" for subsequent machining processes on the part (i.e., machine speed vs. tool diameter) (See Column 7/lines 14-19).

Fishman does not produce a message to advise the operator to change his cutting tool.

It would have been obvious to one who had ordinary skill in the art at the time of the invention that the chart (See Figure 11) as taught by Fishman who does provide the appropriate feedback to the operator to make a determination about changing cutting tool sizes based on its information of optimal cutting speed data from the optimization module vs. tool size for a particular operation such as drilling. It would have been obvious to one who had ordinary skill in the art at the time of the invention that because this chart is programmed into an optimization module that the most appropriate tool for the operation could be highlighted on the chart to advise the operator to use that tool bit based on the charts' determination basis.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure.

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U.S. Pat. No. 5,991,528 to Taylor et al.

Taylor teaches about Manufacturing Computer Database system which could be used as prior art.

U.S. Pat. No. 5,485,390 to LeClair et al.

LeClair teaches about simulating machining processes to aid CNC machining, and could be used as prior art.

U.S. Pat. No. 5,568,028 to Uchiyama et al.

Uchiyama teaches about simulating tool life, which is really the main focus of simulating a machine process. It is specific, but the machining condition variables (e.g., feed rate, loads on the machine parts, such as spindle, etc.) are inherent or directly related to tool life and could be used as prior art.

U.S. Pat. No. 5,659,493 to Kiridena et al.

Kiridena teaches about a virtual machining process which has some aspects that could be used as prior art.

U.S. Pat. No. 6,202,043 B1 to Devoino et al.

Devoina teaches about simulating process systems, but it is more of a general model.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Kavitsky whose telephone number is (703) 305-4623.

The examiner can normally be reached on Monday thru Friday from 8:00 AM to noon and 1:00 PM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Teska, can be reached on (703) 305-9704. The fax number for the

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organization where the application or proceeding is assigned is (703) 746-7239. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed of the receptionist whose telephone number is (703) 305-3900.



KEVIN J. TESKA
SUPERVISORY
PATENT EXAMINER